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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/065,988 | 12/06/2002 | Edward L.W. Soong | P003 | 4525 |

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EXAMINER

CHOW, CHIH CHING

ART UNIT PAPER NUMBER

2192

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/065,988 | Applicant(s) SOONG ET AL. | |
| | Examiner Chih-Ching Chow | Art Unit 2192 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the application filed on December 06, 2002.
2. The priority date considered for this application is December 06, 2002.
3. Claims 1-10 have been examined.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Elizabeth Alumbaugh et al. US2003/0172368 (hereinafter "Alumbaugh").

CLAIM

1. An information processing system and method for planning, design, and implementation of Web-based data integration, distributed query processing and distributed transactions management, comprising:

(a) A software solution that includes an XML--based middleware for developing Web-based distributed applications.

(b) A programming model that defines

Alumbaugh

Alumbaugh teaches a method to integrate software application and database resources so they can interoperate with other disparate data sources and applications. For item (a), See Alumbaugh's paragraph 32, "it is an additional object of the invention to significantly reduce the time and manpower required to plan, analyze, design, and generate an interoperability

the underlining architecture.

(c) A Graphical User Interface (GUI)-based tool kit that supports installation, customization, and administration of the Web-based applications under this architecture.

plan for applications." Alumbaugh's disclosure actually covers more than XML-based middleware, see paragraph 20, "Language adapters accomplish integration by mapping the syntax of one programming language with another (COBAL, RPC, C, Basic, IDL, Tcl, and others) so that older legacy software systems can connect to new applications using the same programming standards (JAVA, XML, COM, EJB, Visual Basic, and the like) that the more modern systems use to communicate with each other." And in paragraph 22, "Middleware adapters provide connectivity and interoperability by using specialized bridging applications that support application interoperability and data interchange. **Middleware** adapters use languages and protocols such as XML, FTP, MQ Series and ODBC to accomplish environmental connectivity, transapplication workflow, **data mapping**, and programmatic exchanges across applications that in turn initiates an event that causes additional programmatic actions." And paragraph 25, "Intelligent adapters are aware of application metadata and they provide integration performance improvements by moving business rule processing from centralized integration brokers to the **distributed application** adapter, thus **reducing network traffic**." For item (b), see Alumbaugh's paragraph 123, "The Model", and the

description of the model, paragraphs 124-133. For item (c), Alumbaugh's disclosure also teaches using GUI-based user interface, see paragraph 69, "'Hub' means the central entry point into the system from external interfaces and from the GUI. The hub controls session management activities including user authentication, retaining information for a specific user about the time between logging in and logging out, and routing of user requests to the appropriate system components (*customization and administration*) and routing of the results back to the requester."

2. The information processing system and method of Claim 1 wherein said software solution consists of an XML-based standard for data sharing and the corresponding in-memory data structure.

For the feature of claim 1 see claim 1 rejection. For the rest feature of claim 2 see Alumbaugh's paragraph 63, "means an intelligent software program that evaluates newly created interoperability adapter code to detect errors in code generation, data extraction, aggregation and insertion or would hinder the software application programs to interoperate (process a transaction and **exchange data**)."

And paragraph 80, "'Ontology' means the specification of conceptualizations, used to help programs and humans **share knowledge**."

- *data sharing*. Further in FIG. 3 and paragraph 233, "Schema discovery involves reading the meta-data stored in a **data source** 310 to produce a schema 360 that is placed into a memory model

(in-memory data structure), which can then be displayed in textual 380 or graphic 390 form."

3. The software solution of Claim 2 wherein said XML-based standard serves as the global schema for the distributed environment and the transfer syntax for data exchange among the participating sub-systems in this environment.

For the feature of claim 2 see claim 2 rejection. Alumbaugh's disclosure is for data exchange among the participating sub-system in this environment, see Alumbaugh's paragraph 4, "Providing **application integration between heterogeneous software applications, environments and data resources** (data sources) requires some type of provision for transformation, format, **interface**, and data connectivity services. These services are provided by a collection of software components that are collectively called adapters. Adapters integrate software application and database resources so they can **interoperate with other disparate data sources and applications**. They provide the **interface** between the application and, with most current integration approaches, the **messaging subsystems that connects to the various applications**."

4. The software solution of Claim 2 wherein said XML-based standard defines the transfer syntax for marshaling the objects of in-memory data structure over the Internet.

For the feature of claim 2 see claim 2 rejection. Alumbaugh's disclosure transfers data over the internet, see paragraph 280, "the system of our invention, which may be on a CD Rom or downloaded from the **Internet**, or other apparatus or software components, is installed in the integrated environment."

5. The software solution of Claim 2 wherein said in-memory data structure is a relational data representation for local manipulation in disconnected mode. Under this construct, the participating sub-system may share data in the way that they have agreed upon.

For the feature of claim 2 see claim 2 rejection. For the rest of claim 5 feature see Alumbaugh's paragraph 80, "Ontology" means the specification of conceptualizations, used to help programs and humans share knowledge. In this usage, an ontology is a set of concepts--such as things, events, and relations--that are **specified in some way** (such as specific natural language) in order to **create an agreed-upon vocabulary for exchanging information.**"

6. The software solution of Claim 2 wherein said in-memory data structure is a class and objects as its instance may be taken by web services as arguments and may be returned by web services.

For the feature of claim 2 see claim 2 rejection. For the rest of claim 6 feature see Alumbaugh's paragraph 107, "the Logical Architecture describes the behavior of a system's application. Since the system of the current invention can be written in Java, the descriptions of the logical architecture map directly to Java packages and **classes** (*Java is also an object-oriented programming language*). For the most part, component types can be mapped to Java packages. Components can be mapped to Java **classes.**" Alumbaugh's disclosure is web-services-based, see paragraph 293, "This type of system focuses on the management of content, primarily for web-based applications and portals. In most cases, Content Management systems enforce policies for changing and updating content and

for establishing connections with content sources. They may also provide specialized search engines or equivalent functionality. (*web services*)"

7. The software solution of Claim 2 wherein said XML-base standard and corresponding in-memory data structure are equivalent. That is, the data elements in the XML message that follows the standard, and those reside in the in-memory data structure may be seamlessly converted back and forth. This equivalency has laid the basis for the method of our invention.

For the feature of claim 2 see claim 2 rejection. Alumbaugh uses 'standard' interfaces among participating systems, see paragraph 237, "This component connects to applications through **standard interfaces**, which include JDBC, ODBC, Flat File Translators, and the like. It makes an analysis of the application and extracts the meta-data model in the form of a schema. The schema manager stores the schema and then provides an interface to other components to retrieve the schema when necessary"

8. The method of Claim 1 wherein said software solution provides a systematical way in which distributed query processing and distributed transaction management may be carried out.

For the feature of claim 1 see claim 1 rejection. Alumbaugh's disclosure uses a systematical way for query processing, see paragraph 91, "'Stored Procedure' means a **compiled query** stored on the database server and used for efficiency and encapsulation process. (*may be carried out*) "

9. The method of Claim 1 wherein said middleware is composed of the in-memory data structure and an interface to the data sources. It is the interface that synchronizes the data structure and its data sources, so that the discrepancy between heterogeneous

For the feature of claim 1 see claim 1 rejection. For the rest of claim 9 feature see claim 1 and claim 3 rejections.

data sources can be cancelled.

10. The method of Claim 1 is implemented in data-consolidation server products by using various technology, including Microsoft .NET Framework and J2EE standard.

For the feature of claim 1 see claim 1 rejection. Alumbaugh's disclosure also uses J2EE, see paragraph 215, "RMP is the native, default, and Java-only higher-level protocol. IIOP allows Java objects to communicate with CORBA or J2EE objects. RMI relies on TCP/IP for its underlying network protocol."

Conclusion

The following summarizes the status of the claims:

35 USC § 102 rejection: Claims 1-10

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Ching Chow whose telephone number is 571-272-3693. The examiner can normally be reached on 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on 571-272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Any inquiry of a general nature of relating to the status of this application should be directed to the **TC2100 Group receptionist: 571-272-2100.**

Art Unit: 2192

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chih-Ching Chow
Examiner
Art Unit 2192
April 14, 2005

cc



ANTONY NGUYEN-BA
PRIMARY EXAMINER